

REMARKS

Claims 1-24 are pending in the present application. Claims 17-20 are cancelled above as being drawn to a non-elected invention, and claims 21-24 are also canceled. Claims 1, 2, and 4-16 are amended above. No new matter is added by the claim amendments. Entry is respectfully requested.

FIGs. 1 and 11 of the drawings stand objected to for informalities stated in te Office Action. In the drawings, FIG. 1 is amended to include the legend "Prior Art", and FIG. 11 is amended to correct the spelling of "OPTICAL" at element 166. The amendments are believed to address the stated informalities. Entry of the amendments and removal of the objections are respectfully requested.

Claims 1, 2, 4, 7-9, 12, and 13 are rejected as being unpatentable over Kawase, *et al.* (U.S. Patent No. 6,628,214) in view of Takauchi, *et al.* (U.S. Patent No. 6,292,284) and further in view of Adolfsson, *et al.* (U.S. Patent No. 4,290,146). Claim 3 is rejected as being unpatentable over Kawase, *et al.* in view of Takauchi, *et al.* and Adolfsson, *et al.*, and further in view of Simcoe, *et al.* (U.S. Patent No. 5,018,142). Claims 14 and 15 are rejected as being unpatentable over Kawase, *et al.* in view of Takauchi, *et al.* and Adolfsson, *et al.*, and further in view of Haneda, *et al.* (U.S. Patent No. 6,195,370). Reconsideration of the rejections and allowance of the claims are respectfully requested.

With regard to the rejection of claim 1, it is submitted that the combined teachings of Kawase, Takauchi, and Adolfsson fail to teach or suggest the invention as claimed in the amended claim. In particular, the combination fails to teach or suggest "the first current signal and second current signal being modulated in accordance with first and second transmission loss compensation signals decoded from an error detection signal received from a remote receiving apparatus", as claimed in amended claim 1. The combination does not teach or suggest modulation of the current signals driving the optical channels individually, based on independently determined "first and second transmission loss compensation signals" as claimed.

Nor does the combination teach or suggest that such signals are “decoded from” a common “error detection signal” that is received from the “remote receiving apparatus”, as claimed. Further, the combination fails to teach or suggest a “receiving apparatus” that “detects first and second transmission loss in each of the first and second optical signals “ that occurs “as a result of their transmission and reception” as claimed in amended claim 1. Nor does the combination teach or suggest the “receiving apparatus … encoding the first and second transmission loss signals to generate an encoded transmission loss signal”, as claimed in amended claim 1. The combination makes no mention of encoding multiple transmission loss feedback signals pertaining to the first and second transmission channels into a combined error detection signal, that is provided to the transmitting apparatus via the second optical fiber in this manner.

With regard to the rejection of claim 7, it is submitted that the combined teachings of Kawase, Takaaji, and Adolfsson fail to teach or suggest the invention as claimed in the amended claim. In particular, the combination fails to teach or suggest “the first current signal and second current signal being modulated in accordance with first and second transmission loss compensation signals decoded from an error detection signal received from a remote receiving apparatus”, as claimed in amended claim 7. The combination does not teach or suggest modulation of the current signals driving the optical channels individually, based on independently determined “first and second transmission loss compensation signals” as claimed. Nor does the combination teach or suggest that such signals are “decoded from” a common “error detection signal” that is received from the “remote receiving apparatus”, as claimed. Further, the combination fails to teach or suggest a “receiving apparatus” that “detects first and second transmission loss in each of the first and second optical signals “ that occurs “as a result of their transmission and reception” as claimed in amended claim 7. Nor does the combination teach or suggest the “receiving apparatus … encoding the first and second transmission loss signals to generate an encoded transmission loss signal”, as claimed in amended claim 7. The combination makes no mention of encoding multiple transmission loss feedback signals pertaining to the first and second transmission channels into a combined error detection signal, that is provided to the transmitting apparatus via the “electrical transmission line” in this manner.

With regard to the rejection of claim 12, it is submitted that the combined teachings of Kawase, Takauji, and Adolfsson fail to teach or suggest the invention as claimed in the amended claim. In particular, the combination fails to teach or suggest “decoding first and second transmission loss compensation signals from the digital error compensation signal”, as claimed in amended claim 12. None of the references disclose the decoding of such as feedback signal. Nor do the references teach or suggest “modulating the magnitudes of the converted first and second current signals in accordance with the corresponding first and second transmission loss compensation signals”, as claimed in amended claim 12. The combination does not teach or suggest modulation of the current signals driving the optical channels individually, based on independently determined “first and second transmission loss compensation signals” as claimed. Nor does the combination teach or suggest that such signals are “decoded from” a common “error detection signal” that is received from the “external receiving apparatus”, as claimed.

It is therefore submitted that independent claims 1, 7, and 12 are in condition for allowance, and such allowance is respectfully requested. With regard to dependent claims 2-6, 8-11, and 13-16, it follows that these claims should inherit the allowability of the independent claims from which they depend.

Claims 21-23 are rejected as being unpatentable over Kawase, *et al.* in view of Takauji, *et al.* and Adolfsson, *et al.*, and further in view of Jeong (U.S. Patent No. 6,211,714). Claim 24 is rejected as being unpatentable over Kawase, *et al.* in view of Takauji, *et al.*, Adolfsson, *et al.* and Jeong, *et al.*, and further in view of Bentz, *et al.* (U.S. Patent No. 6,363,441). Claims 21-24 are canceled above. Removal of the rejection is respectfully requested.

Closing Remarks

It is submitted that all claims are in condition for allowance, and such allowance is respectfully requested. If prosecution of the application can be expedited by a telephone conference, the Examiner is invited to call the undersigned at the number given below.

Respectfully submitted,



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